

# Insulin Pumps in the School Setting

A student in your school has diabetes and is on an insulin pump. An insulin pump is a device that continuously infuses a very small amount of fast-acting insulin through a small catheter under the skin. The student then takes additional insulin through the pump for meals and snacks. We would like to emphasize that problems and complications with insulin pumps are very seldom seen. For the most part, you will not be aware that the student is using the pump, although you may hear an occasional quiet beep or click when insulin is being dispensed by the pump. The following information may assist you in helping the student wearing an insulin pump.

## *Blood Sugar Testing*

When a student is on an insulin pump, more frequent blood sugar testing may be necessary. If the testing can be done in the classroom, which would be preferred, as the student will miss less classroom time. Testing can also be done in the office or clinic if necessary.

## *Low Blood Sugar*

If a student who is on an insulin pump experiences a low blood sugar reaction, these guidelines should be followed:

- ✓ If the blood sugar is between 50-70mg/dl, the student needs to take about 15 grams of carbohydrate, which is the equivalent to 4 oz. of juice, 3-4 glucose tablets, or 4 oz. of regular pop.
- ✓ If the blood sugar is less than 50mg/dl, the student may need to eat as much as 30 grams of carbohydrate (15 grams of one of the above in addition to 15 grams of a small snack, i.e., cheese crackers, or a granola bar).

- ✓ If the student should experience a severe low blood sugar where the student is unconscious or is having a convulsion, 911 should be called or Glucagon may be given by appropriately trained staff. **The pump should not be removed and the pump dosage should not be adjusted in any way.**

## *High Blood Sugars*

High blood sugars over 300mg/dl may be an early indication that the pump is not infusing the insulin as it should or that the child is ill. If the student's blood sugar is over 300dl at mealtime, urine ketones should be checked. If the urine ketones are negative, the student can give an additional insulin dose through the insulin pump along with the usual lunch insulin dose. The student should then recheck a blood sugar in 1 hour to be sure it is coming down. If the blood sugar is above 300mg/dl and the ketones are small, moderate, or large, the student will need to be given an insulin dose with a syringe and drink 8 oz. of water an hour until the ketones disappear. The student will also have to change the infusion site and tubing for the insulin pump. The student should have a vial of fast-acting insulin and insulin syringes available in the clinic in case they need to give an additional injection.

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### *Exercise*

During times of vigorous exercise, the student may need to disconnect from the pump. For this, the student needs to place the pump in a safe place where it will not be damaged. During prolonged exercise, many students reconnect the pump periodically and take insulin. Some students wear their pump during exercise and use a special case to protect it.

### *Questions?*

If you have any questions, speak with the student and the student's family. They can be a tremendous resource for you. You may also contact the pump manufacturer for resource information for school health personnel.

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